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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,914	01/16/2004	Joseph E. Yokajty	86936RLO	8040

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EXAMINER	
SCHATZ, CHRISTOPHER	
ART UNIT	**PAPER NUMBER**
1733	

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/759,914	YOKAJTY ET AL.	
	Examiner	Art Unit	
	Christopher T. Schatz	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) *16-19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 1/16/04
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-15, 17, and 18 in the reply filed on June 21, 2006 is acknowledged. Applicant's arguments have been considered but are not found persuasive. Applicant argues that the same classes should be searched by the USPTO. Examiner asserts that because the Inventions are classified in different classes, the same areas need not be searched and doing so would place a search burden on the examiner. Claims 16 and 19 are withdrawn as being drawn to a non-elected invention.

The requirement is still deemed proper and is therefore made FINAL.

2. Additionally, this application contains claims directed to the following patentably distinct species:

Species A, drawn to a method of bonding a cover plate over a plurality of encapsulated top-emitting OLED devices.

Species B, drawn to a method of bonding a cover plate over a plurality of encapsulated bottom-emitting OLED devices

The species are independent or distinct because the methods are mutually exclusive.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

During a conversation with Raymond L. Owens, a provisional election was made to prosecute the invention of Species A, Claims 1-15. Affirmation of this election must be made by applicant in replying to this Office action. Claims 17 and 18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 5-10, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Park et al. (US 2003/0218422).

Park et al. '422 discloses a method of bonding a cover plate over OLED devices formed on a surface of a device substrate wherein each one of the OLED devices includes at least one electrical interconnect area, comprising: a) providing a flow-preventing pattern 410 on a surface of the cover plate or the OLED devices absent from the electrical interconnect areas of the OLED devices to prevent flow of a flowable adhesive material into at least the outermost portions of such interconnect areas (paragraph 0027); b) dispensing a selected amount of a flowable curable adhesive material 420 on the surface of the cover plate or the OLED devices in registration with the flow-preventing pattern; and c) engaging the cover plate in alignment with the substrate and curing the adhesive material (figures 3C-3F, 4C-4F, paragraphs 0012-0014, 0019-0033).

As to claim 2, Park et al. '422 discloses a method of bonding a cover plate 200 over a plurality of encapsulated top-emitting OLED devices formed on a surface of a device substrate 100 wherein each one of the plurality of OLED devices includes a pixelated display area and at least one electrical interconnect area, comprising: a) providing a flow-preventing pattern 410 on a surface of the cover plate or a surface of the OLED devices and at least at positions corresponding to positions of the electrical interconnect areas of the OLED devices to prevent flow of a flowable adhesive material into at least outermost portions of such interconnect areas (paragraph 0027); b) dispensing a selected amount of a flowable curable adhesive material 420 on the surface of the cover plate or a surface of the OLED devices in registration with the flow-preventing pattern; c) engaging the cover plate in alignment with the device substrate so that the selected amount of the flowable adhesive material flows to spread to a nearest edge or to nearest edges of the flow-preventing pattern and over the pixelated display area of each one of the

plurality of OLED devices and being prevented from flowing or spreading into the flow-preventing pattern so that outermost portions of the interconnect areas are free from any adhesive material; d) curing the spread adhesive material to provide uniform bonding between the cover plate and at least the pixelated display area of each OLED device, thereby achieving a structural buffer layer; and e) singulating the OLED devices and the bonded cover plate to provide individual top-emitting OLED devices having a bonded cover plate and permitting access to the at least one electrical interconnect area for attaching electrical leads thereto (figures 3C-3F, 4C-4F, paragraphs 0012-0014, 0019-0033).

As to claim 3, Park et al. '422 discloses a method wherein element a) includes providing the flow-preventing pattern by forming dams (figures 3C-3F, 4C-4F). As to claim 5, Park et al. '422 discloses a method wherein forming dams includes dispensing a pattern of a substantially viscous and curable adhesive material having a viscosity in a range from 25,000 to 250,000 cp (paragraph 0023) As to claim 6, Park et al. '422 discloses a method wherein dispensing the pattern includes dispensing a plurality of unidirectional dams, a plurality of closed rectilinear dams, a plurality of partially open rectilinear dams, or a plurality of perpendicular sets of dams (figures). As to claim 7, Park et al. '422 discloses a method wherein element b) includes dispensing a pattern of a flowable adhesive material having a viscosity in a range from 50 to 1,000 cp (paragraph 0023) As to claim 8, Park et al. '422 discloses a method wherein dispensing the pattern includes dispensing a line pattern or a dot pattern (figures 3C, 4C). As to claim 9, Park et al. '422 discloses a method wherein element d) includes directing curing radiation at the spread adhesive material through the cover plate (paragraphs 0025-0026). As to claim 10, Park et al. '422 discloses a method further including curing the substantially viscous curable adhesive

material by directing curing radiation at the dams through the cover plate (paragraph 0023-0024). As to claim 14, Park et al. '422 discloses a method further including dispensing the adhesive material at positions approximately centered with respect to the pixelated display areas of the OLED devices.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. '422 as applied to claim 2 above, and further in view of Matsuoka (US 2003/0067268).

Park et al. '422 discloses a method as discussed in reference to claim 2 above, but the reference is silent as to a method wherein engaging occurs without external forces. Matsuoka et al. discloses a method of boding a cover plate over a plurality of OLED devices, said method comprising providing a flow preventing pattern 46; dispensing a flowable adhesive material 30; and engaging the cover plate with a device substrate absent any external forces (paragraphs 0014, 0019, 0034). Applicant should note that Matsuoka explicitly discloses that the cover plate and device substrate are affixed to each other in a vacuum, and Matsuoka points out that no external forces are applied in the vacuum during engagement. Matsuoka further discloses that engaging the cover plate and substrate without externally applied forces eliminates one cause for breaking of the cover glass during lamination (paragraph 0034). At the time of the invention it

would have been obvious to a person of ordinary skill in the art to engage the cover plate 200 to the device substrate 100 of Park et al. '443 without application of external forces as taught by Matsuoka above. Such a modification to the method of Park et al. '422 would eliminate one cause for the breaking of the cover during lamination.

7. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. '422 as applied to claim 2 above, and further in view of Park et al. (US 2002/0155320).

Park et al. '422 discloses a method as discussed in reference to claim 2 above, but the reference is silent as to a method wherein the flow preventing patterns comprise groove. Park et al. '320 discloses a method of encapsulating an OLED device by bonding a cover plate to a device substrate wherein a flow preventing pattern is provided on the cover or device substrate. Park et al. '320 further discloses that the flow preventing pattern can be a groove (59, 99, 125, 135A, 135B) or a dam (79, 119, 129, 139A, 139B), and that a groove or an adhesive dam are alternative equivalent methods of preventing the flow of an adhesive during encapsulation. At the time of the invention it would have been obvious to a person of ordinary skill in the art to form the flow-preventing patterns as grooves as an alternative to the dams in the method of Park et al. '422 because the grooves are an art recognized equivalent alternative as taught by Park et al. '320 above.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. '422 as applied to claim 2 above, and further in view of Suzuki et al. '217.

Park et al. '422 discloses a method as discussed in reference to claim 2 above, and the reference further discloses that the flowable adhesive material 420 has a specific glass transition temperature (paragraph 0023). The reference is silent, however, as to a method of heating to a

temperature that such that said adhesive material reaches at least its glass transition temperature to facilitate the spreading of said adhesive material. Suzuki et al. discloses a method of encapsulating an OLED device wherein a flowable adhesive material is applied to encapsulate said device and heated to facilitate the flowing of said adhesive without curing. Suzuki et al. further discloses that heating the adhesive material to facilitate flowing allows fine defects in the cathode to be filled, and increases the affinity of the adhesive for the OLED device (column 6, line 47 – column 7, line 14). At the time of the invention it would have been obvious to a person of ordinary skill in the art to heat the flowable adhesive material 420 of Park et al. '422 beyond is glass transition temperature to facilitate the flowing of said adhesive. Such a modification to the method of Park et al. '422 would fill small defects in the cathode layer and increase the affinity of the adhesive 420 for the OLED.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher T. Schatz whose telephone number is 571-272-1456. The examiner can normally be reached on 8:00-5:30, Monday -Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher P. Schatz

JUSTIN FISCHER
PATENT EXAMINER